

In the Claims:

Please amend the claims as follows:

1. (Once Amended) An apparatus for determining a blood flow in a vessel, comprising:

(a) an elongate catheter having a stenosis reducing member [an angioplasty balloon], a blood property change port and a downstream sensor spaced from the port for producing a signal corresponding to a blood property.

2. (Once Amended) The apparatus of Claim 1, wherein one of the sensor and the catheter [are] is configured to locate the sensor with respect to the vessel to minimize wall effects.

10. (Once Amended) The catheter of Claim 9, wherein one of the sensor and the catheter [are] is configured to locate the sensor with respect to the vessel to minimize wall effects.

15. (Once Amended) An apparatus for determining blood flow, comprising:

(a) a dilution indicator source;

(b) a[n angioplasty] catheter connectable to the dilution indicator source, the [angioplasty] catheter having means for performing a vascular corrective procedure [an angioplasty balloon], a dilution indicator port for passing a dilution indicator therethrough and a downstream sensor for producing a signal corresponding to passage of the dilution indicator; and

(c) a controller connected to the dilution indicator source and the sensor for calculating a blood flow in response to the signal from the sensor.

16. (Once Amended) A method for quantitatively measuring [an angioplasty] a reduced stenosis induced flow change, comprising:

(a) inserting a catheter and a blood property sensor into a vessel having a blood flow corresponding to the stenosis [angioplasty];

(b) introducing a first change in a blood property upstream of the blood property sensor;

(c) detecting passage of the first change in the blood property at the blood property sensor;

(d) reducing the stenosis of in the vessel [expanding an angioplasty member];

(e) introducing a second change in the blood property upstream of the sensor;

(f) detecting passage of the second change in the blood property at the blood property sensor; and

(g) determining a change in blood flow corresponding to the detected passage of the first change in the blood property and the second change in the blood property.

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17. (Once Amended) The method of Claim 16, wherein inserting a catheter and a blood property sensor into a vessel [having a blood flow corresponding to the angioplasty] includes inserting a first catheter having a stenosis reducing [the angioplasty] member and a second catheter having the blood property sensor.

18. (Once Amended) The method of Claim 16, wherein inserting a catheter and a blood property sensor into a vessel [having a blood flow corresponding to the angioplasty] includes inserting a catheter having a stenosis reducing [the angioplasty] member and the blood property sensor.

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19. (Once Amended) A method of monitoring blood flow during a vascular corrective procedure [angioplasty], comprising:

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- (a) inserting a[n angioplasty] catheter into a vessel;
  - (b) employing the catheter to perform a vascular correction in the vessel [expanding the angioplasty catheter];
  - (c) introducing a first blood property change;
  - (d) detecting passage of the first blood property change past a downstream sensor on the catheter; and
  - (e) calculating the blood flow in response to the change in blood property and passage of the blood property past the downstream sensor.

20. (Once Amended) An apparatus for determining [a] blood flow in a vascular passage, comprising:

- (a) a catheter having means for increasing the effective size of a portion of the vascular passage, the catheter including a dilution indicator introduction port and a downstream blood property sensor; and
- (b) a controller operably connected to the blood property sensor for calculating a flow through the vascular passage corresponding to a signal from the blood property sensor.